

THE PORT AUTHORITY
OF NY & NJ



ORIGINAL SIGNED & SEALED BY
N.Y. P.E. (OR R.A.)

Joseph R. Loring & Associates, Inc.
consulting engineers

One Pennsylvania Plaza
New York, New York 100-048
Tel. 212-512-7400, Fax 212-512-7402

THE OFFICE OF
DANIEL LEBOWITZ
P.E.
20 WEST 44TH STREET NEW YORK NY 10036
Tel. 212-693-7400 Fax 212-693-7402

LESLIE E. ROBERTSON
ASSOCIATES, R.L.P.
CONSULTING ELECTRICAL ENGINEERS
20 EAST 44TH STREET
NEW YORK, NY 10017
Tel. 212-693-7400 Fax 212-693-7402

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS AND NOT A REPRODUCTION OF THE SAME.

DATE 11/16/98 *Enlow A. Adam*
DATE 11/10/98 *P.L. Loring*
ENGINEER OF DESIGN

No.	Date	Revision	Approved
1	11/17/97	ISSUED FOR BID	

Engineering Department
Design Division

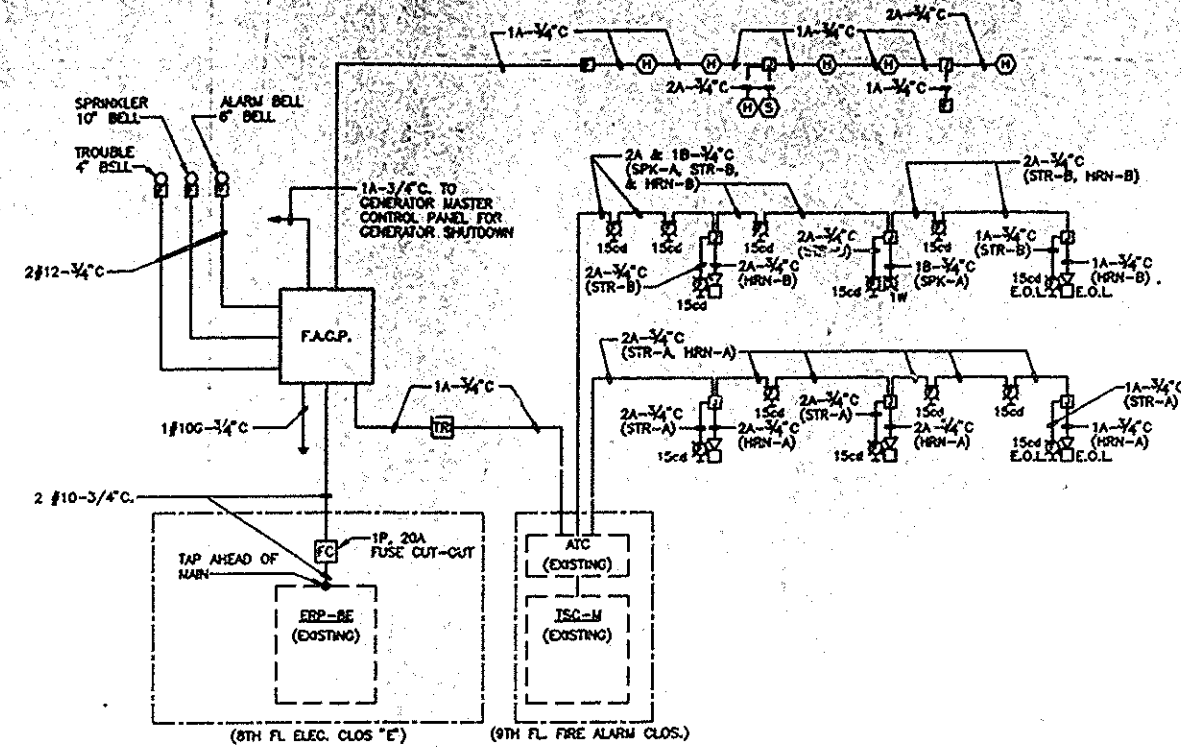
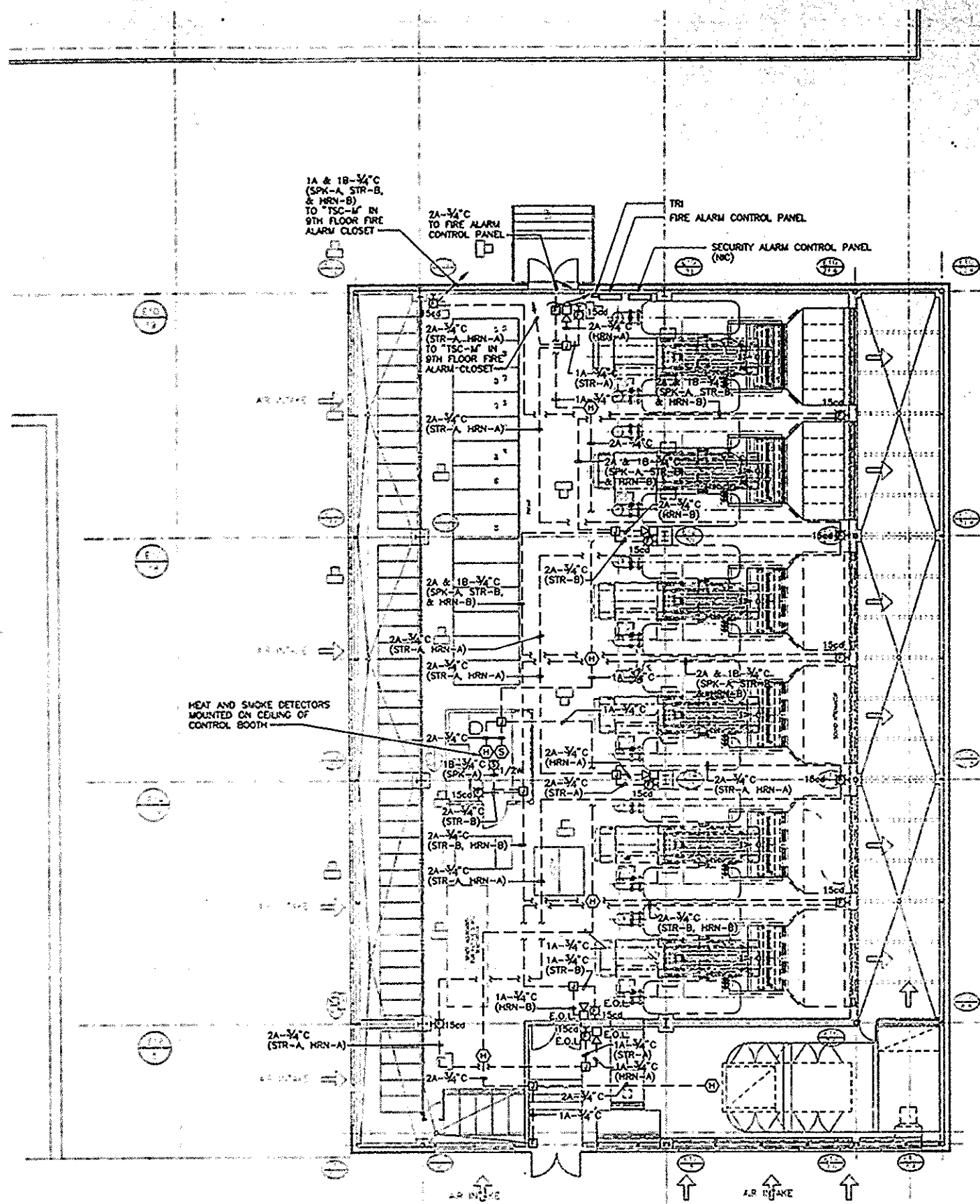
The World Trade Center

STANDBY POWER
5 WORLD TRADE CENTER

ELECTRICAL
GENERATOR ROOM
FIRE ALARM

This drawing is subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

P.L. M.A.R.
Designed by Drawn by checked by
Date 11/17/97 AS NOTED
Contract Number Drawing Number
NTC-945.071 E2-02



FIRE ALARM RISER DIAGRAM
NOT TO SCALE

STROBE CIRCUIT/LOADING TABLE				
STROBE TYPE	TYPE	75°Cd CURRENT PER CIRCUIT (A)	75°Cd CURRENT PER CIRCUIT (A)	CIRCUIT LENGTH (FT)
QUANTITIES OF STROBES PER CIRCUIT	STR-A	6	0.48	300
	STR-B	7	0.56	290
GRAND TOTAL			1.04	590

SPEAKER CIRCUIT/LOADING TABLE				
SPEAKER TYP/DB SETTING	(WATTS)	1/2	TOTAL POWER (WATTS)	CIRCUIT LENGTH (FT)
SPKR-A	1/2	1/2	150	

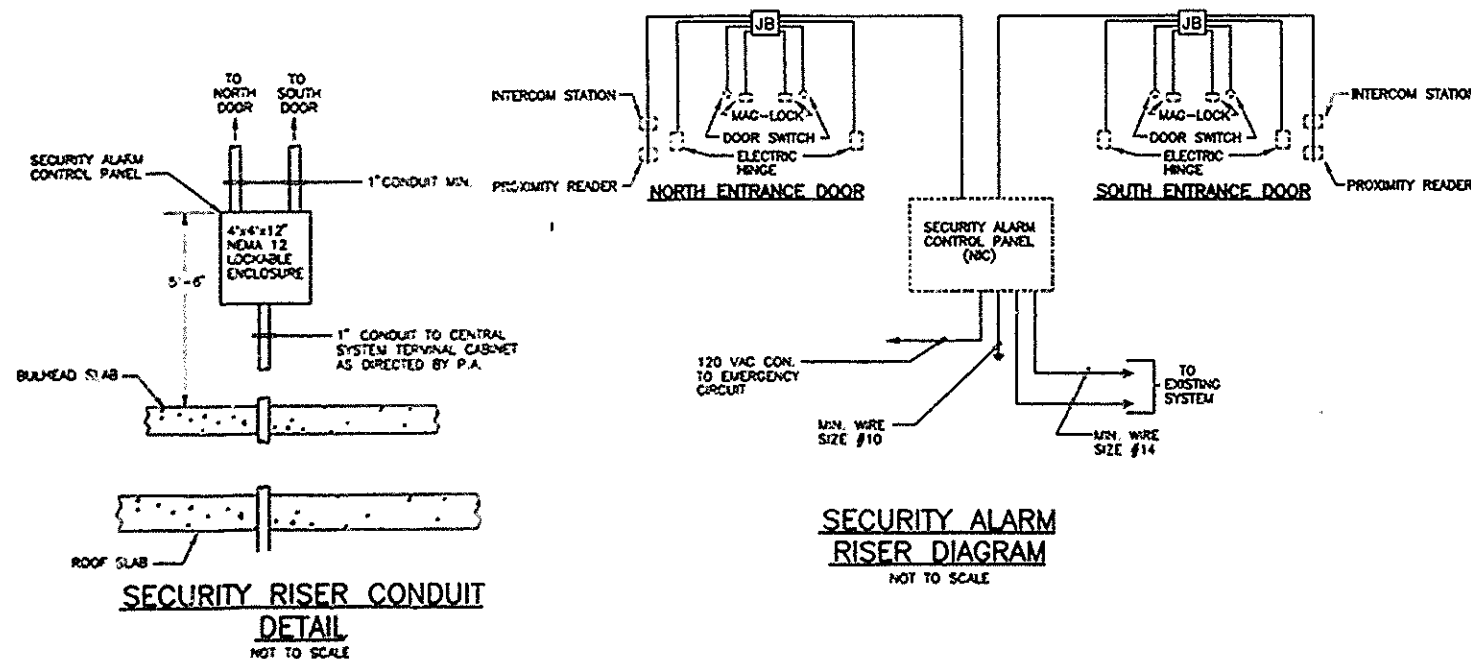
HORN CIRCUIT/LOADING TABLE				
HORN db SETTING	(AMPS)	0.6	CURRENT PER CIRCUIT (AMPS)	CIRCUIT LENGTH (FT)
QUANTITIES OF HORNS PER CIRCUIT	HRN-A	3	1.8	300
	HRN-B	2	1.2	270

- LEGEND**
- NUMBER OF CABLES
- 2A OR B
- TYPE OF CABLE
- A - 2 #14 AWG, 200°C, 600V SHIELDED TWISTED PAIR TEFLOON CABLE, CLASS 'E' & BSA APPROVED N.Y.C. FOR LOCAL LAW #5.
- B - 2 #14 AWG, 200°C, 600V UNSHIELDED TWISTED PAIR TEFLOON CABLE, CLASS 'E' AND BSA APPROVED N.Y.C. FOR LOCAL LAW #5.
- XXX-XXX
- ALD LOOP DEVICE ADDRESS: FIRST THREE DIGIT REPRESENT NETWORK/LOOP ADDRESS (AS DIRECTED BY ENGINEER), AND LAST THREE DIGIT REPRESENT DEVICE ADDRESS.
- 15cd
- FLUSH MOUNTED STROBE WHEELLOCK, CANDELA RATING AS INDICATED.
- MODEL # AND ORDER AS FOLLOWS:
- 15cd - RSS-2415W-FR
- 30cd - RSS-2430W-FR
- 75cd - RSS-2475W-FR
- NO SUBSTITUTIONS.
- POLARIZED ELECTRONIC HORN PYROTRONICS MODEL SEA-3, NO SUBSTITUTIONS.
- ADDRESSABLE PULL STATION, PYROTRONICS MODEL PWS-1-SS2 METAL SURFACE MOUNTED, BACKBOX MS-58 CLASS E WITH NYC WHITE STRIP, NO SUBSTITUTIONS. FURNISHED BY PORT AUTHORITY.
- WALL MOUNTED SQUARE SPEAKER, WHEELLOCK MODEL #70-R WITHOUT SUBSTITUTION. TAP SETTING AS INDICATED. WITH BACK BOX #58B
- ADDRESSABLE IONIZATION HIGH VELOCITY SMOKE DETECTOR PYROTRONICS MODEL #FP-11 WITH BASE #D6-11. NO SUBSTITUTIONS. FURNISHED AND INSTALLED BY CONTRACTOR.
- OPEN AREA HEAT DETECTOR - RATE COMPENSATION - 200°F PYROTRONICS MODEL #D6-11. NO SUBSTITUTIONS. FURNISHED AND INSTALLED BY CONTRACTOR.
- PYROTRONICS MODEL TRI-840 DUAL ADDRESSABLE INTERFACE SWITCH MODULE MOUNTED IN 6" x 6" x 4" PULLBOX, FURNISHED AND INSTALLED BY CONTRACTOR.
- END OF LINE (1/2 WATT 24K Ω.O.H.) RESISTOR, FURNISHED AND INSTALLED BY CONTRACTOR.
- SQUARE PULL BOX 4 11/16" - UNLESS OTHERWISE NOTED.
- EXISTING TERMINAL STRIP CABINET
- EXISTING ADDRESSABLE TERMINAL CABINET

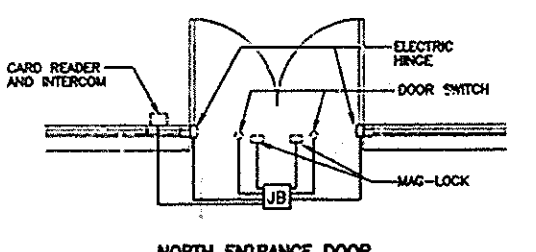
FIRE ALARM (F.A.) NOTES:

- ALL FIRE ALARM CABLES SHALL BE TYPE FPLP-UL TWISTED PAIR #14 GAUGE SOLID COPPER (U.L.I.), 200°C, 600V SHIELDED (EXCEPT FOR SPEAKERS WHICH USE UNSHIELDED). INSULATED CONDUCTORS CLASS 'E' BSA AND MEA APPROVED FOR NYC LOCAL LAW #5 TEFLOON OR APPROVED EQUAL. WIRE STRIP, AND CONDUCTORS COLORED BLACK AND RED. ALL CABLES TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- ALL CONDUITS SHALL BE RIGID STEEL, HOT DIPPED GALVANIZED WITH THREADED FITTINGS, UNLESS OTHERWISE NOTED.
- ALL RACEWAY, ENCLOSURES AND BOXES SHALL BE GROUNDED IN AN APPROVED MANNER.
- GROUND BUSHING SHALL BE INSTALLED ON ALL CONDUITS PENETRATING ENCLOSURES.
- ALL PENETRATIONS MADE IN EXISTING FIRE ALARM EQUIPMENT SHALL BE MADE IN PRESENCE OF THE ENGINEER.
- SHAPING AND LABELING OF CABLES AT INTERFACE, XNET, TSC, ATC AND NTC CABINETS WILL BE PERFORMED BY THE CONTRACTOR. THIS WORK SHALL BE DONE IN PRESENCE OF THE ENGINEER. FINAL CONNECTIONS TO INTERFACE, XNET, TSC, ATC AND NTC CABINETS WILL BE MADE BY OTHERS.
- PATCH AND SEAL ALL CONDUITS PASSING THRU WALLS, FIRE RATED CONSTRUCTION AND PLENUMS WITH THERMAPRIMER OR IPCC FLAME-SAFE.
- TEST ALL REELS OF FIRE ALARM CABLE FOR CONTINUITY AND SHORTS, PRIOR TO INSTALLATION.
- CONTRACTOR SHALL USE BRADY LABELS #MIL-205-292-1 FOR LABELING OF ALL CONDUCTORS.
- ALL BOX COVERS, CONDUIT COVERS, ETC. SHALL BE PAINTED RED. USE 2" STENCILS AND WHITE PAINT ON ALL COVERS INDICATING "5" FOR 5 WTC SYSTEM DESIGNATION.
- CONTRACTOR SHALL PERFORM PROGRAMMING OF ALL ADDRESSABLE DEVICES. FINAL CONFIGURATION OF ADDRESSES SHALL BE AS DIRECTED BY THE ENGINEER, PRIOR TO PROGRAMMING DEVICES.
- FINAL CONNECTIONS TO THE BLUENOISE FIRE ALARM AND TSC WILL BE MADE BY OTHERS. CONTRACTOR TO LEAVE 5' COIL OF CABLE INSIDE THE TSC CABINET. THIS WORK SHALL BE DONE IN PRESENCE OF THE ENGINEER.

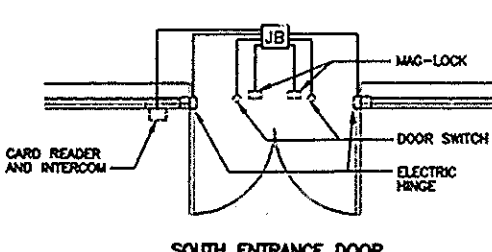
**5 WTC STANDBY GENERATOR BULKHEAD
FIRE ALARM AND SECURITY SYSTEM**



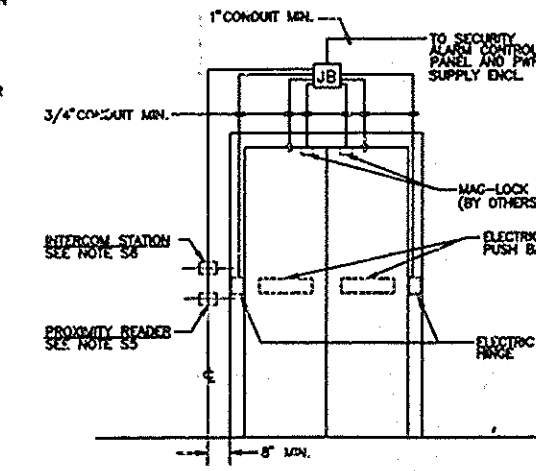
**SECURITY ALARM
RISER DIAGRAM**
NOT TO SCALE



NORTH ENTRANCE DOOR



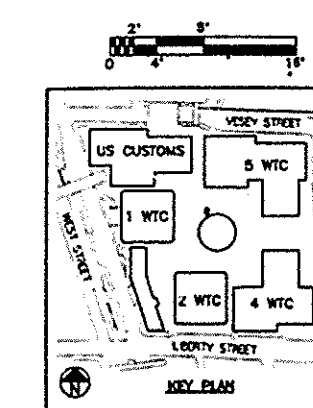
SOUTH ENTRANCE DOOR



**DOOR ALARM DEVICE LOCATION
TYPICAL FOR 2
(EMPTY CONDUIT ONLY)**
NOT TO SCALE

SECURITY ALARM NOTES:

- FOR GENERAL NOTES AND SYMBOL LIST SEE DRAWING E0-01.
- ALL SECURITY RACEWAY INSTALLATION SHALL BE COORDINATED WITH THE P.A.
- CONTRACTOR TO OBTAIN FROM THE P.A. DEVICE OUTLET BOXES FOR VARIOUS TYPE OF SECURITY DEVICES. DEVICE OUTLET SHALL MEET TYP. REQUIREMENTS OF DEVICE TO BE INSTALLED.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL EMPTY CONDUITS WITH DRAG WIRE. TERMINATE ALL CONDUITS AT DEVICE OUTLET BOXES, COORDINATE LOCATION WITH INSTALLATION DRAWINGS TYPICAL FOR ALL DEVICES.
- TERMINATE EMPTY CONDUIT AT LOCATION OF OUTLET BOX. PROXIMITY READER OUTLET BOX(ING) LOCATION AT 36" AFF. ROUTE CONDUIT TO JUNCTION BOX ABOVE DOOR.
- TERMINATE EMPTY CONDUIT AT LOCATION OF OUTLET BOX. INTERCOM STATION OUTLET BOX(ING) LOCATION AT 50" AFF. ROUTE CONDUIT TO JUNCTION BOX ABOVE DOOR.



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